

## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE LIST OF REFERENCES CITED BY APPLICANT(S) (Use several sheets if necessary)			ATTY DOCKET NO. 2000_1727	SERIAL NO. 09/740,068	 DEC 21 2005 U.S. PATENT & TRADEMARK OFFICE		
Date Submitted to PTO: December 21, 2005			APPLICANT Mitsuaki OSHIMA	FILING DATE December 20, 2000			
U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/RC/	AA	4,597,090	6-24-86	Forney, Jr.			
/RC/	AB	4,077,021	2-28-78	Csajka et al.			
/RC/	AC	2005/0084750	4-21-05	Wang et al.			
/RC/	AD	2005/0058633	3-17-05	Epstein et al.			
/RC/	AE	2005/0922922					
/RC/	AE	4,918,437	4-17-90	Jasinski et al.			
/RC/	AG	5,023,889	6-11-91	Divsalar et al.			
/RC/	AH	5,063,452	11-5-91	Higurashi			
/RC/	AI	5,124,852	6-23-92	Suwa et al.			
/RC/	AJ	5,136,380	8-4-92	Cho			
/RC/	AK	5,146,335	9-8-92	Kim et al.			
/RC/	AL	5,148,422	9-15-92	Sako et al.			
/RC/	AM	5,218,436	6-8-93	Sugiyama et al.			
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
/RC/	AN	2627574	7-21-04	CN			
/RC/	AO	1529838	5-11-05	EP			abstract
/RC/	AP	1499725	5-26-04	CN			only abstract
/RC/	AQ	2004-159207	6-3-04	JP			corresponds to AP
/RC/	AR	1528854	5-11-05	EP			only abstract
/RC/	AS	52118	12-16-02	UA			only abstract
/RC/	AT	1569334	1-26-05	CN			x
OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)							
	AU						
EXAMINER	/Robert Chevalier/			DATE CONSIDERED	04/22/2009		

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Sheet 1 of 1.

## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

ATTY DOCKET NO.  
2000\_1727SERIAL NO.  
09/740,068U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEAPPLICANT  
Mitsuaki OSHIMALIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)

Date Submitted to PTO: June 2, 2006

FILING DATE  
December 20, 2000GROUP  
2615

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/RC/	AA	4,267,592	5-12-81	Craiglow			
/RC/	AB	4,601,045	7-15-86	Lubarsky			
/RC/	AC	4,912,706	3-27-90	Eisenberg et al.			
/RC/	AD	4,914,655	4-3-90	Johannes et al.			
/RC/	AE	5,018,198	5-21-91	Takahashi			
/RC/	AF	4,003,002	1-11-77	Snijders et al.			
/RC/	AG	4,053,713	10-11-77	Nitadori			
	AH						
	AI						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	AJ						
	AK						
	AL						
	AM						
	AN						

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

	AO	
	AP	
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U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)

Date Submitted to PTO: August 5, 2008

ATTY DOCKET NO.  
2000\_1727SERIAL NO.  
09/740,068APPLICANT  
Mitsuaki OSHIMAFILING DATE  
December 20, 2000GROUP  
2615

## U.S. PATENT DOCUMENTS

* EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/RC/	AA	5,706,428	1-6-98	Boer et al.			
/RC/	AB	6,526,264	2-25-03	Sugar et al.			
/RC/	AC	5,950,124	9-7-99	Trompower et al.			
/RC/	AD	6,977,944	12-20-05	Brockmann et al.			
/RC/	AE	7,352,822	4-1-08	Oshima			
/RC/	AF	7,362,813	4-22-08	Oshima			
/RC/	AG	7,158,577	1-2-07	Oshima			
	AH						
	AI						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	BA						
	BB						
	BC						
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	BE						

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

/RC/	CA	U.S. Office Action issued <u>May 5, 2008</u> in U.S. Application Serial No. <u>11/980,510</u>
/RC/	CA	U.S. Office Action issued <u>June 24, 2008</u> in U.S. Application Serial No. <u>11/905,978</u>
	CC	

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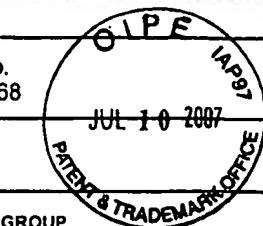
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09/740,068U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)

Date Submitted to PTO: July 10, 2007

APPLICANT  
Mitsuaki OSHIMAFILING DATE  
December 20, 2000GROUP  
2615

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/RC/	AA	4,882,725	11-21-89	Noda et al.			
/RC/	AB	4,985,769	1-15-91	Yasumoto et al.			
/RC/	AC	5,276,507	1-4-94	Uwabata et al.			
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## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
/RC/	AJ	60-24753	2-7-85	Japan			partial & abstract
/RC/	AK	2-278940	11-15-90	Japan			partial & abstract
	AL						
	AM						
	AN						

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

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04/22/2009

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## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)

Date Submitted to PTO: March 6, 2007

ATTY DOCKET NO.  
2000\_1727SERIAL NO.  
09/740,068APPLICANT  
Mitsuaki OSHIMAFILING DATE  
December 20, 2000GROUP  
2615

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/RC/	AA	5,210,770	5-11-93	Rice			
/RC/	AB	5,519,730	5-21-96	Jasper et al.			
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
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## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
/RC/	AJ	3-13145	1-22-91	Japan			abstract
/RC/	AK	4-322592	11-12-92	Japan			abstract
/RC/	AL	63-253738	10-20-88	Japan			abstract
/RC/	AM	62-502932	11-19-87	Japan			abstract
/RC/	AN	58-107740	6-27-83	Japan			abstract

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

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04/22/2009

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Sheet 1 of 2							
INFORMATION DISCLOSURE STATEMENT							
U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		M A R 2 3 2005		ATTY DOCKET NO. 2000_1727	SERIAL NO. 09/740,068		
LIST OF REFERENCES CITED BY APPLICANT(S) (Use several sheets if necessary)				APPLICANT Mitsuaki OSHIMA			
Date Submitted to PTO: March 23, 2005				FILING DATE December 20, 2000		GROUP 2615	
U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/RC/	AA	3,824,548	7-16-74	Sullivan et al.			
/RC/	AB	3,959,726	5-25-76	Hinoshita et al.			
/RC/	AC	4,303,939	12-1-81	Stephens et al.			
/RC/	AD	4,303,941	12-1-81	Marti et al.			
/RC/	AE	4,309,726	1-5-82	Tanaka et al.			
/RC/	AF	4,535,352	8-85	Haskell			
/RC/	AG	4,564,858	1-14-86	Resch			
/RC/	AH	4,581,639	4-8-86	Judge			
/RC/	AI	4,769,819	9-6-88	Matsutani et al.			
/RC/	AJ	4,794,447	12-27-88	Tsinberg			
/RC/	AK	4,800,426	1-24-89	Glenn			
/RC/	AL	4,817,192	3-28-89	Phillips et al.			
/RC/	AM	5,007,088	4-9-91	Ooi et al.			
/RC/	AN	5,029,003	7-91	Jonnalagadda			
/RC/	AO	5,134,464	7-28-92	Basile et al.			
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
/RC/	AP	3-48587	3-1-91	Japan			abstract
OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)							
/RC/	AQ	Masafumi SAITO et al., "Bit Error Rate Characteristics of OFDM in Multipath Environment", 1991					
/RC/	AR	Ryutaro OHMOTO et al., " $\pi/4$ -shift QPSK Subcarrier Transmission", 1991					
EXAMINER /Robert Chevalier/				DATE CONSIDERED 04/22/2009			

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09/740,068U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)APPLICANT  
Mitsuaki OSHIMA

Date Submitted to PTO: March 23, 2005

FILING DATE  
December 20, 2000GROUP  
2615

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/RC/	AA	5,181,112	1-19-93	Citta et al.			
/RC/	AB	5,214,656	5-25-93	Chung et al.			
/RC/	AC	5,218,622	6-8-93	Fazel et al.			
/RC/	AD	5,377,051	12-27-94	Lane et al.			
/RC/	AE	5,400,084	3-21-95	Scarpa			
/RC/	AF	5,561,468	10-1-96	Bryan et al.			
/RC/	AG	5,576,902	11-19-96	Lane et al.			
/RC/	AH	5,598,220	1-97	Citta et al.			
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## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
/RC/	AJ	5-327807	12-10-93	Japan			abstract
/RC/	AK	7-264148	10-13-95	Japan			abstract
/RC/	AL	7-322219	12-8-95	Japan			abstract
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## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

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Sheet 1 of 1

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PATENT AND TRADEMARK OFFICEAPPLICANT  
Mitsuaki OSHIMALIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)FILING DATE  
December 20, 2000GROUP  
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PATENT & TRADEMARK OFFICE  
INITIAL

Date Submitted to PTO: April 14, 2005

## U.S. PATENT DOCUMENTS

EXAMINER & TRADEMARK OFFICE INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
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## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	AJ						
	AK						
	AL						
	AM						
	AN						

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

/RC/	AO	J. A. C. Bingham, "Multicarrier Modulation for Data Transmission: An Idea Whose Time Has Come", IEEE Communications Magazine, Vol. 28, May 1990, pages 5-8 and 11-14
/RC/	AP	B. Hirosaki, "An Orthogonally Multiplexed QAM System Using the Discrete Fourier Transform", IEEE Transactions on Communications, Vol. Com-29, No. 7, July 1981, pages 982-989
/RC/	AQ	L. J. Cimini, Jr., "Analysis and Simulation of a Digital Mobile Channel Using Orthogonal Frequency Division Multiplexing", IEEE Transactions on Communications, Vol. Com-33, No. 7, July 1985, pages 665-675 and Annex

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PATENT AND TRADEMARK OFFICEAPPLICANT  
Mitsuaki OSHIMALIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)FILING DATE  
December 20, 2000GROUP  
2615

Date Submitted to PTO: August 24, 2004

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
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	AF						
	AG						
	AH						
	AI						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
<i>AC</i>	AJ	2-154583	6-13-90	Japan			abstract
	AK						
	AL						
	AM						
	AN						

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

<i>AC</i>	AO	Shigeki MORIYAMA et al., "Delay Propagation Characteristics at VHF and UHF bands in Urban Area", 1991 Spring National Convention Record, The Institute of Electronics, Information and Communication Engineers, Part 2, p. 406, March 15, 1991
<i>AC</i>	AP	Yasuhiro ITO et al., "Adaptive Weighted Code Division Multiplexing (AW-CDM) Transmission System for Terrestrial Digital Television Broadcasting", ITE Technical Report Vol. 17, No. 13, pp 27-32, February 25, 1993
	AQ	

EXAMINER Robert Ch. al.

DATE CONSIDERED

3/1/05